4.12 SOCIOECONOMICS

This section presents the socioeconomic setting for the Project analysis. The regional and local population and economic existing conditions are presented, followed by a discussion of the contribution that Chevron makes to the regional and local economies. Impacts on socioeconomics from the Project and alternatives are then presented. The level of impact of Long Wharf operations to the local and regional economy is assessed`.

4.12.1 Environmental Setting

Regional Setting

Population

Table 4.12-1 summarizes Contra Costa County (County) demographics from the 1990 and 2000 census. The County's growth rate from 1990 through 2000 period was 18 percent. During the same time period, housing increased by approximately 38,407 units or by 12 percent. Employment increased by 11 percent from 1990 through 2000. By 2010, the population of the County is expected to increase by 13 percent to 1,071,400. By 2020, the population is expected to increase to 1,152,900, or 21.5 percent from 2000 (State of California 2001).

Table 4.12-1
Demographics Summary for Contra Costa County
1990 and 2000

	1990	2000	1990 to 2000	
			Growth	Change
Population	803,732	948,816	145,084	18%
Housing Units	316,170	354,577	38,407	12%
Employment	406,507	451,357	44,850	11%
Source: U.S. Census Bureau 1991; 2001a, b				

Employment

Between 1990 through 2000, employment in the County grew by approximately 11 percent, shown in Table 4.12-2. The services sector experienced the most job growth, approximately 45 percent. The second largest increase in the number of jobs was in transportation, communications, and utilities with a 33 percent increase.

The categories of agriculture, forestry, fisheries, mining, manufacturing, wholesale and retail trade, and public administration all saw decreases in the number of jobs. The decreases ranged from 1 percent for public administration to 74 percent for agriculture, forestry, fisheries, and mining.

Table 4.12-2
Employment Growth by Industrial Sector
for Contra Costa County for 1990-2000

			Change	
	1990	2000	Number	Percent
Agriculture, forestry, fisheries, and mining	9,016	2,311	-6,705	-74
Construction	31,543	34,403	2,860	9
Manufacturing	47,056	38,281	-8,775	-19
Transportation, Communications, and Utilities	34,150	45,283	11,133	33
Wholesale and Retail Trade	84,165	69,052	-15,113	-18
Finance, Insurance, and Real Estate	46,217	47,361	1,144	2
Services	135,332	195,863	60,531	45
Public Administration	19,028	18,803	-225	-1
Total	**406,507**	**451,357**	**44,850**	**11**
Source: U.S. Census Bureau 1991, 2001b				

Local Setting

Population

Between 1990 through 2000, population in the city of Richmond (City) increased by 11,791, a 13 percent increase, shown in Table 4.12-3. Housing units increased by 1,512, or 4 percent during the same time period. Total employment increased by 10 percent, or 3,946 jobs between 1990 through 2000.

Table 4.12-3
Demographics Summary for Richmond
1990 and 2000

	1990	2000	1990 to 2000	
			Growth	Change
Population	87,425	99,216	11,791	13%
Housing Units	34,532	36,044	1,512	4%
Employment	38,823	42,769	3,946	10%
Source: U.S. Census Bureau 1991; 2001a, b				

Employment

From 1990 through 2000, the construction; services; and transportation, communications, and utilities job sectors were the only sectors which had an increase in jobs, shown in Table 4.12-4. The construction sector increased by 43 percent; the services sector increased by 38 percent; and the transportation, communications, and utilities sectors increased by 35 percent. All other job sectors saw a decrease in jobs. However, the total number of jobs increased by 10 percent from 1990 through 2000. In 2000, Chevron was the largest employer in the City (City of Richmond 2000).

Table 4.12-4
Employment Growth by Industrial Sector for Richmond City for 1990-2000

			Change	
	1990	2000	Number	Percent
Agriculture, forestry, fisheries, and mining	579	139	-440	-76
Construction	2,089	2,982	893	43
Manufacturing	4,332	3,738	-594	-14
Transportation, Communications, and Utilities	3,675	4,974	1,299	35
Wholesale and Retail Trade	7,286	5,832	1,454	-20
Finance, Insurance, and Real Estate	3,145	3,051	-94	-3
Services	14,478	19,923	5,445	38
Public Administration	3,239	2,130	-1,109	-34
Total	38,823	42,769	3,946	10
Source: U.S. Census Bureau 1991, 2001b				

Chevron's Contribution to the Economy

The Refinery is a major contributor to the local and regional economy. In 1993, Chevron hired Gruen, Gruen & Associates to prepare a report entitled "The Economic and Fiscal Effect of Manufacturing, Heavy Industry, and Chevron Activities on Contra Costa County, the City of Richmond, and the Richmond Unified School District." The report evaluates the economic and fiscal impacts of the continued operations of Chevron and similar industries on both a City-wide and a County-wide level. The following discussion is based on that report.

Chevron's Contribution to the Local Economy

The manufacturing sector was the single-most important source of jobs with an employment base of 5,758 or 20.3 percent of total City-wide employment. Heavy industry represented 3,460 manufacturing jobs, or 60.1 percent of all jobs in the

manufacturing sector, and 12.2 percent of City-wide employment. Employment in petroleum/refining accounted for 10.2 percent of City-wide employment and approximately half of the manufacturing sector.

In August 1992, Chevron had 3,238 full-time employees at the Refinery and related manufacturing operations in Richmond. The Refinery and related manufacturing provided 11.4 percent of all jobs in the City, and 56.2 percent of all manufacturing jobs in the City. In addition, 271 people, or 1 percent of the City's total employment, were employed in jobs not classified by the Employment Development Department (EDD) as manufacturing. Chevron's employment in the City represents over 12 percent of the City's total jobs. Table 4.12-5 provides a comparison among the estimated total manufacturing, heavy industry, and Chevron wage and salary employment in the city of Richmond. The data were taken from the U.S. Bureau of the Census, County Business Patterns 1990; U.S. Post Office, National Information Data Center and Post Office Directory; EDD; and Chevron.

Table 4.12-6 compares the estimated total manufacturing, heavy industry, and Chevron wage and salary payroll in the city of Richmond. The Refinery and related manufacturing paid at least 12.8 percent of all wages and salaries paid in the City, or $162,875,000 in 1992. This equals approximately 56 percent of all manufacturing payrolls in Richmond. In 1992, wages and salaries paid by Chevron in Richmond, including non-manufacturing activities, totaled approximately $177,091,000. The data were taken from the Department of Commerce, Bureau of Economic Analysis, Chevron, EDD, and Gruen, Gruen & Associates.

Chevron's Contribution to the Regional Economy

In 1990, there were 298,200 wage and salary employees in the County. The manufacturing sector was the fourth largest employment group, representing 31,700 jobs or 10.6 percent of County employment, with manufacturing employment in the Petroleum/Refining sector (SIC 29) employing 9,200 in 1990.

Table 4.12-7 compares total manufacturing, heavy industry, the Petroleum/Refining sector, and Chevron wage and salary employment in the County. The data were taken from a census of employment by activity type and job site conducted by the Chevron companies in the County. As of August 1992, Chevron employment in the County totaled 9,210. Of this, the Refinery and related non-Refinery manufacturing in Richmond totaled 3,238 jobs or 10.3 percent of the County's manufacturing employment.

Table 4.12-5
Estimated Total Manufacturing, Heavy Industry, and Chevron Wage & Salary Employment in the City of Richmond

	Number	Percent of Total Richmond Employment	Percent of Richmond Manufacturing Employment
Total Employment[1]	28,324	100.0	N/A
Manufacturing Employment[1] (SICs 20-39)	5,758	20.3	100.0
Employment in Heavy Industries (SICs 28-30)[2]	3,460	12.2	60.1
Employment in Petroleum/Refining (SIC 29)[2]	2,900[3]	10.2	50.4
Chevron Refinery/Manufacturing in Richmond[4]	3,238	11.4	56.2
Chevron Non-Manufacturing in Richmond	271	1.0	N/A
Total Chevron Activities in Richmond	3,509	12.4	N/A

[1] 1990 employment estimated by Gruen, Gruen & Associates.
[2] Includes Standard Industrial Classification (SIC) codes: Chemicals & Allied Products (SIC 28), Petroleum/Refining (SIC 29), and Rubber & Plastics (SIC 30) estimated by Gruen, Gruen & Associates.
[3] A significant number of jobs in Petroleum/Refining are in Chevron's non-Refinery Operations. These primarily are included in Chevron's Research & Technology Division.
[4] Employment as of August 1992 reported by Chevron; Refinery is categorized by EDD as being in the manufacturing sector. Approximately 86% of non-Refinery employment in Richmond is categorized by EDD as being in the manufacturing sector.
Source: Gruen, Gruen & Associates 1993.

Table 4.12-6
Estimated Total Manufacturing, Heavy Industry, and Chevron Wage & Salary Payroll in the City of Richmond

	Amount ($000s)	Percent of Total Richmond Wage & Salary	Percent of Richmond Manufacturing Wage & Salary
Total Wage & Salary Payroll[1]	1,275,755	100.0	---
Manufacturing Wage & Salary Payroll (SICs 20-39)[1]	290,558	22.8	100.0
Heavy Industry Wage & Salary Payroll (SICs 28-30)[1]	229,194	18.0	78.9
Petroleum/Refining Wage & Salary Payroll (SIC 29)[2]	207,642[3]	16.3	71.5
Chevron Refinery/Manufacturing in Richmond[4]	162,875[5]	12.8	56.1
Chevron non-Manufacturing/Mining, Transportation and Wholesale in Richmond[6]	14,216	1.1	4.9
Total Chevron Activities in Richmond	177,091	13.9	---

[1] 1990 wage & salary estimated by Gruen, Gruen & Associates.
[2] Includes ONLY Chemicals & Allied Products (SIC 28), Petroleum/Refining (SIC 29), estimated by Gruen, Gruen & Associates.
[3] A significant number of jobs in Petroleum/Refining are in Chevron's non-Refinery Operations. These primarily are included in Chevron's Research & Technology Division.
[4] Payroll as of August 1992 reported by Chevron; Refinery employment is categorized by EDD as manufacturing and approximately 86% of non-Refinery employment is categorized by EDD as being in the manufacturing sector.
[5] Does not include an estimate of overtime for non-Refinery employees. Overtime represents approximately 10% of Refinery payroll.
[6] As of August 1992, reported by Chevron, does not include overtime.
Source: Gruen, Gruen & Associates 1993.

Table 4.12-7
Estimated Total Manufacturing, Heavy Industry, and Chevron Wage & Salary Employment in Contra Costa County

	Number	Percent of Total Contra Costa County Employment	Percent of Contra Costa County Manufacturing Employment
Total Employment[1]	298,200	100.0	---
Manufacturing Employment[1]	31,700	10.6	100.0
Employment in Heavy Industries (SICs 28-30)[2]	14,200	4.8	44.8
Employment in Petroleum/ Refining (SIC 29)[1]	9,200	3.1	29.0
Chevron Refinery in Richmond[3]	1,571	0.5	5.0
Chevron non-Refinery Manufacturing Employment in Richmond[4]	1,667	0.6	5.3
Chevron non-Manufacturing Employment in Richmond	271	0.1	0.9
Chevron Manufacturing Employment Elsewhere in County[5]	5,302	1.8	16.7
Chevron non-Manufacturing Employment Elsewhere in County	399	0.1	1.3
Total Chevron Manufacturing Employment in Contra Costa County	8,540	2.9	26.9
Total Chevron Employment in Contra Costa County[6]	9,210	3.1	---

[1] 1990 employment reported by EDD.
[2] Includes Chemicals & Allied Products (SIC 28), Petroleum/Refining (SIC 29), and Rubber & Plastics (SIC 30).
[3] Employment as of August 1992, reported by Chevron; EDD categorizes Refinery employment as manufacturing.
[4] As of August 1992, reported by Chevron; approximately 86% of non-Refinery employment in Richmond is categorized by EDD as being in the manufacturing sector.
[5] As of August 1992, reported by Chevron; approximately 93% of Chevron Contra Costa County employment outside of Richmond is categorized by EDD as being in the manufacturing sector.
[6] Employment as of August 1992, reported by Chevron.
Source: Gruen, Gruen & Associates 1993.

4.12.2 Regulatory Setting

There are no regulatory requirements that apply to socieonomics.

4.12.3 Impact Significance Criteria

Impacts were considered to be significant if the proposed Project or any alternatives would:

- Result in a substantial decrease in the employment and economic base of the City of Richmond and/or Contra Costa County, or to Chevron;

- Induce substantial growth or concentration of population, or displace a large number of people; or
- Have a potential to impact the local or regional economy due to oil spills.

4.12.4 Impacts Analysis and Mitigation Measures

Long Wharf operations employ up to 25 people, with a minimum of 7 working at any one time. Operations are 24 hours per day, 7 days per week. As presented in Section 4.12.1, Environmental Setting, the Refinery employs about 1,500 persons, which equates to about 6 percent of total City-wide employment. The total number of City employed residents was 46,140 in 1990, and is expected to be 58,800 by 2010. The Refinery represents 12.8 percent of the total wages and salary for the City, and a small contribution overall to the County. With direct and indirect income derived from support services, the Refinery contributes substantially to the overall income in the City. In 1990, the Refinery and related services represented $352 million of income, or approximately 28 percent of the City's income. The 25 employees necessary for Long Wharf operations adds an incremental, but insignificant, increase in total wages and salary paid. Contributions to the local and regional economies from these additional workers in the form of indirect or induced jobs would result in a small increase in wages. There would be no decrease in employment or in the economic base due to Long Wharf operations. There would also be no growth inducement or change in population concentrations or displacement. Therefore, no impacts would result from operations.

Impact SOC-1: Accidental Releases of Oil

Impacts from oil releases could degrade the environment and preclude the use of shoreline land and associated recreational activities. Potential socioeconomic implications would include any area, structure, or facility that could experience business interruption and loss of revenue as a result of a spill and resultant cleanup operations. Impacts could be Class I or II, depending on severity of impact.

As discussed in Section 4.5 Land Use/Recreation, impacts from oil releases could degrade the environment and preclude the use of shoreline land and associated recreational activities at the site of the release and the areas affected by the spread of the oil. Table 4.5-1 in that section shows the number of piers, marinas, and shoreline recreational areas that could be affected based on the modeled oil spill scenarios. However, given the right wind and current conditions, almost any shoreline or recreational area could be affected.

The potential socioeconomic implications would include any area, structure, or facility that could experience business interruption and loss of revenue as a result of a spill and resultant cleanup operations. Depending on the affected land uses/recreation resources and related businesses, impacts can be minor and localized, or large and affect whole communities or, in the event of a major incident, have regional implications.

Thus, any spill event that would result in loss of business revenue would be considered to be a significant (Class I or II) impact. Even with mitigation, in the form of monetary compensation for losses, some impacts would be expected to remain significant.

Mitigation Measures for SOC-1:

SOC-1. Mitigation would be in the form of monetary compensation for losses in accordance with the California Oil Spill Prevention and Response Act.

Rationale for Mitigation: The provision of monetary compensation could help to recover monetary losses from business interruptions resulting directly or indirectly from oil spill events. Such compensation would serve to help businesses stay away from bankruptcy, by providing help through a time period where public access may be either directly or indirectly restricted, or during a period where no or little business would occur due to little public interest in visiting an area or using a business during cleanup operations.

Residual Impact: Even with mitigation, in the form of monetary compensation for losses, some impacts could be expected to remain significant.

4.12.5 Alternatives Impact Analysis

Impact SOC-2: No Project Alternative

The No Project Alternative could indirectly impact the Refinery, since there would be no transport of crude or product from the Long Wharf. An alternative means of crude oil / product transportation would be in place prior to decommissioning of the Long Wharf, resulting in impacts that would be considered adverse, but less than significant (Class III).

Under the No Project Alternative, Chevron's lease would not be renewed and the existing Long Wharf would be subsequently decommissioned with its components abandoned in place, removed, or a combination thereof. The decommissioning of the Long Wharf would follow an Abandonment and Restoration Plan as described in Section 3.3.1, No Project Alternative.

Under the No Project Alternative, alternative means of crude oil / product transportation would need to be in place prior to decommissioning of the Long Wharf, or the operation of the Chevron Refinery would cease production, at least temporarily. It is more likely, however, that under the No Project Alternative, Chevron would pursue alternative means of traditional crude oil transportation, such as a pipeline transportation, or use of a different marine terminal. Accordingly, this EIR describes and analyzes the potential environmental impacts of these alternatives. For the purposes of this EIR, it has been assumed that the No Project Alternative would result in a decommissioning schedule that would consider implementation of one of the described transportation alternatives.

Any future crude oil or product transportation alternative would be the subject of a subsequent application to the CSLC and other agencies having jurisdiction, depending on the proposed alternative.

With no Long Wharf, there would be a direct impact to Chevron of the loss of 25 workers. Refinery operations could be significantly impacted with no delivery of crude or product to processing operations. With no operations, the Refinery, which represents 12.8 percent of the total wages and salary for the city of Richmond, would cease and both Refinery operations and city income could be severely constrained. As discussed above, an Abandonment and Restoration Plan would be placed into action while the Long Wharf is decommissioned to avoid significant impacts to the Chevron Refinery. Still, some impacts due to a loss of employees, shift in revenue to Chevron and the city of Richmond, and potential short-term impacts to Refinery operations while the transition occurs would result in adverse, but less than significant impacts (Class III).

SOC-2: No mitigation is required.

Impact SOC-3: Full Throughput via Pipeline Alternative

New pipeline(s) would likely be required to equal the current daily receipt of crude processed through the Refinery. Pipeline construction could provide a short-term beneficial (Class IV) economic boost to the local economy by directly providing jobs, and indirectly through the support of the sale of materials, food, and other incidentals. Long-term, the No Project Alternative would not increase growth or concentration of population, or displace a large number of people. Impacts to the local and regional social environment and economy would be considered adverse, but less than significant (Class III).

This alternative assumes that with no wharf to receive crude or transport product, that pipelines could be used. Crude would continue to be received from Alaska and foreign sources by arrangements with other Bay Area terminals and then delivered via pipeline(s) to the Chevron Refinery. New pipeline(s) would likely be required to equal the current daily receipt of crude processed through the Refinery (245,000 bbls).

Some additional crude could possibly be delivered from the Central Valley. However, the Richmond Refinery is not currently configured to process crude oils from the California Central Valley. The Refinery used to receive crude oil by pipeline from the Central Valley, but this was halted in 1991 and the facilities that were used to process this crude have been dismantled. The Refinery would have to reconfigure process systems to handle Central Valley crude.

Shipment of product also would require arrangements with other area terminals, including the pipeline connections. The Refinery delivers some products through common-carrier pipelines owned and operated by Kinder-Morgan Energy Service (formerly Santa Fe Pipeline). These include SP-1, which routes products to markets in northern California and northern Nevada; SP-2, which routes products to markets along

the San Francisco Peninsula and South Bay area; and SP-3, which routes products to the Oakland and San Francisco airports. The Refinery also delivers products via the BAPL, which is owned and operated by Chevron Pipeline Company. The BAPL pipeline is a Chevron proprietary pipeline used to deliver products to Chevron Marketing terminals in the Avon, Sacramento, San Jose, and Tracy areas.

The conversion to an all-pipeline system would result in an expense to Chevron, not only in terms of actual construction and reconfiguration of operating systems, but also the expenses associated with the land use planning, environmental studies, and agreements with other operators that would be required. Conversion would occur over a period of time, because the Refinery would need to be able to transition from use of the Long Wharf to use of pipelines. Pipeline construction could provide a short-term beneficial (Class IV) economic boost to the local economy by directly providing jobs, and indirectly through the support of the sale of materials, food, and other incidentals. Long-term, the No Project Alternative would not increase growth or concentration of population, or displace a large number of people. Impacts to the local and regional social environment and economy would be considered adverse, but less than significant (Class III).

SOC-3: No mitigation is required.

Impact SOC-4: Conceptual Consolidation Terminal Alternative

A consolidation terminal would benefit other facilities north of the Long Wharf; thus, little benefit would be directly attributable to the Long Wharf. Because this benefit is not considered to be growth inducing, no significant adverse impacts (Class III) would result.

In the EIR/EIS for the Baldwin Channel Navigation Project, the proposed new offshore wharf alternative was shown to result in a net benefit of $6.4 million in savings due to a significant reduction in lightering (Corps 1997). Since this facility would likely be located north of the Long Wharf, similar monetary benefits could be derived from a reduction in lightering from the Conceptual Consolidation Terminal Alternative for those tankers otherwise traveling further north in San Pablo Bay and into Carquinez Strait. In addition, a deep channel to the north would not have to be maintained. However, because this terminal would benefit other facilities north of the Long Wharf, little benefit would be directly attributable to the Long Wharf. Because this benefit is not considered to be growth inducing, no significant adverse impacts (Class III) would result.

SOC-4: No mitigation is required.

4.12.6 Cumulative Impact Analysis

Impact CUM-SOC-1. Socioeconomic Impacts of Cumulative Projects

Individually, the Point Molate Reuse Project may be significant, but cumulatively the projects, including the Long Wharf, would be adverse, but less than significant (Class III).

Cumulatively, the proposed, planned, and foreseeable projects would all contribute to the local and regional economy by the jobs created and revenue generated. Both direct and indirect benefits to the economy would occur. Because there would be no decrease in employment or in the economic base, no cumulative impacts (Class III) would result from these projects. Most of the cumulative projects identified in Section 3.4, Cumulative Projects, are not growth inducing, with the possible exception of the Point Molate Reuse Project. No displacement of persons would occur from the projects, but the Point Molate Reuse Project would add population to the former Navy facility. Individually, the Reuse Project may be significant, but cumulatively the projects would be adverse but less than significant (Class III). Over the life of the new lease, other projects would also occur. Because future projections lead to continued area growth, other future cumulative impacts would also be adverse, but less than significant. The Long Wharf would contribute incrementally to the cumulative environment.

CUM-SOC-1: No mitigation is required.

Table 4.12-8 summarizes Socioeconomics impacts and mitigation measures.

Table 4.12-8
Summary of Socioeconomics Impacts and Mitigation Measures

Impacts	Mitigation Measures
SOC-1: Accidental Releases of Oil	**SOC-1:** Monetary compensation in accordance with the California Oil Spill Prevention and Response Act.
SOC-2: No Project Alternative	**SOC-2:** No mitigation required
SOC-3: Full Throughput via Pipeline Alternative	**SOC-3:** No mitigation required.
SOC-4: Conceptual Consolidation Terminal Alternative	**SOC-4:** No mitigation required.
CUM-SOC-1: Socioeconomic Impacts of Cumulative Projects	**CUM-SOC-1:** No mitigation required.

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